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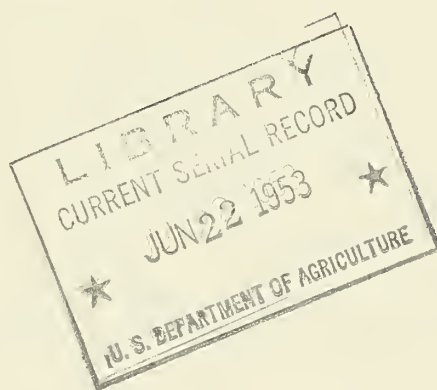
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# MARKETING ACTIVITIES



U.S. DEPARTMENT OF AGRICULTURE  
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Here is a comprehensive study of sanitation procedures for processing lines in poultry plants. In addition to the authors, who are research food technologists with PMA's Poultry Branch, credit for work on the project also is due Dr. Harry E. Goresline, who initiated it, and Milton A. Howe, Jr., both formerly with USDA.

### THE "REEFERS" GO ROLLING ALONG

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The history of railroad refrigerator cars--"reefers" to railway men and shippers--is an interesting one. This article by a staff member of PMA's Office of Information Services will bring you up to date on these chilly box cars that carry a great share of our food from the farm to the local market.

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## MARKETING ACTIVITIES

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# Sanitizing Poultry Processing

By Edwin E. Drewniak and Edward R. Baush

Exceptionally effective sanitation procedures for poultry processing have been developed by USDA research specialists. These improvements aid in assuring the cleanliness of the product and equipment during operations, prolonging the shelf life of poultry products so handled, and cutting plant clean-up time. They are the result of research work done by the Poultry Branch, Production and Marketing Administration, under commercial conditions in cooperating poultry processing plants.

During the course of the research, 5 sanitizing methods were studied, some of which, to some degree and in certain combinations, already are in use in many poultry processing plants. Through modifications and improvements, which included assistance in the development of an improved mechanical washing device for use after evisceration, the Department's research specialists have come up with a number of recommendations and findings. A report on the study, which was made under the Agricultural Marketing Act of 1946, is being prepared for publication. A digest of some of the findings follows:

Generally, visibly cleaner poultry of consistently better sanitary quality would result from the adoption of some of the sanitizing methods studied and found effective. Two methods are particularly recommended: (1) in-plant chlorination of processing water at 10 to 20 parts per million and the use of liberal quantities of this water during processing operations and (2) use of mechanical washing as the last operation on the evisceration line, again accompanied by the use of sufficient chlorinated water to keep this equipment clean. Ultra violet radiation, used in operations just before packaging, is suggested as a further assurance of high sanitary quality of the poultry.

The two other sanitizing methods tested proved less effective than those above. The principle of chemical dipping was found promising because bacterial counts were effectively reduced. More research work is necessary however, to develop better chemicals. Chlorinated snow, ice in snow form made from chlorinated water, was found to be no more effective as a sanitizing agent for use in chilling poultry than snow made from plain water.

Use of water and still more water is a recurring theme in the research findings. Increased use of water through sprays, flushing devices and hand-washing basins will improve operations. "Water, the most important vehicle in the scheme of sanitation," can do a great deal to minimize the possibility of recontamination of poultry during processing operations by washing away bacteria from equipment surfaces, table tops



and hands of workers, it is stressed. The report states that it was "very definitely" shown that operations, which incorporated no washing, but entailed handling of the carcass and removal of highly contaminated parts, such as the crop and viscera, caused increases in the number of bacteria on poultry carcasses.

During the study it was found that the chilling process contributed to the sanitation of the processed poultry. In fact, the cleansing effect of the chilling operation was so marked -- a 79 percent reduction in bacterial count -- that the researchers made two checks, which bore this out. It was found that this was due to the washing action and the diluting action of the chilling water.

### Chlorinated Water Most Effective

Of the sanitation procedures studied, the in-plant chlorination at 20 parts per million concentration in processing water proved to be the most effective over-all means for decreasing bacterial counts. It not only lowered counts on equipment and the poultry being handled, but also eliminated slime, corrosion and plant odors, helped keep pipes and nozzles clear, and reduced plant clean-up time by over 33 percent.

In the phase of the study covering use of chlorinated water as a sanitizing agent, three different chlorine solutions, 10 parts per million, 20 ppm, and 45 ppm, were tested. Processing with 10 ppm in washing water was 82 percent more effective in lowering bacterial counts than water containing no chlorine; 20 ppm was 97 percent more effective, and 45 ppm was 98.5 percent more effective. The percentage difference in effectiveness between 10 and 20 ppm is appreciable and presents a good reason for use of the higher concentration. However, the difference between 20 and 45 ppm in effectiveness is small. This slight additional effectiveness, gained by more than doubling the concentration, together with factors of cost and comfort to workers, who complained of irritated eyes when the higher residual was used, makes the use of 45 ppm inadvisable.

"Preliminary tests have shown, and reports from plants using in-plant chlorination have substantiated, that unfrozen poultry which has been processed under chlorinated water conditions can be expected to have a shelf-life up to 9 days beyond that expected for poultry processed without chlorine," it is stated.

### Mechanical Washing Necessary

During the study of the evisceration line, it was found that spray washing, used as the last operation, was not efficiently cleaning the poultry. Many birds came through this operation with highly contaminated particles of crop and other material still adhering to their outer surfaces. It was decided that a scrubbing action has to be included with the spray to accomplish effective washing. Machines that incorporated both of these actions were in use during other phases of processing and one of them was brought to this point of the eviscerating line and tested. Conclusive evidence was obtained which showed mechanical washing

far superior to spray washing for reducing surface bacteria up to 94 percent and for producing cleaner, fresher-looking birds. As a result of the work improved models produced specifically for washing eviscerated poultry are available.

Both ozone and non-ozone producing ultra-violet tubes were tested at various stages of poultry processing and for different lengths of exposure time. Determinations of the bactericidal action were made and certain effects on the skin surfaces were noted during the various exposure times studied.

"Results from these tests indicate the possibility of the use of ultra-violet radiations as an adjunct to other sanitizing methods at processing operations such as performed along the segmenting and packaging line," the report noted. "More research is needed, however, to determine the most effective types of installations and methods . . . It is evident that the germicidal action of the rays lends itself only to those operations where the chickens are free of adhering materials, water and loose cuticle, and where a dry form of germicidal action is needed. In poultry processing, ultra-violet could best be utilized on the packaging operations where a last sanitizing treatment before the bird is put into the package could be expected to give the bird a higher sanitary quality."

The feasibility of sanitizing eviscerated poultry in a continuous type dip was shown by an 85 percent reduction of bacteria on treated carcasses. Recorded evidence however, points to the need for more research in developing faster acting germicides. It is pointed out that until this is accomplished, space requirements for effective use of this type of procedure would be too great at present processing line speeds.

#### Chlorine Disappears From "Snow"

Artificial snow made from water containing 20 ppm of chlorine was found to be no better as a sanitizing agent than ice made from unchlorinated water. When the snow was made, the chlorine was concentrated in the unfrozen phase and trapped between crystals of ice. As soon as this snow fell into the storage bins the water draining off took the chlorine with it. Tests on tanks of chlorinated snow showed that the chlorine residual dropped constantly so that after 2.5 hours none could be detected in the top portion of the tank and after 8 hours there was none in the bottom portion. If used immediately after manufacture chlorinated snow might have a slight sanitizing action, but held overnight in bins it would lose most of the chlorine in the drain water, it was found.

Throughout the tests it was noted that although poultry should become cleaner and more sanitary during each succeeding step in processing this did not always happen. Many of the processing operations can cause recontamination, unless careful supervision is maintained and improvements in handling are accomplished. Even with the additional sanitizing adjuncts tested and recommended in the report, plant operators will have to watch their operations vigilantly and see that equipment is properly installed and used.

# The "Reefers" Go Rolling Along

By Ben James

It was a hot July 1 up in the St. Lawrence River dairy country. The year -- 1851. A switch engine eased an ordinary looking boxcar of the time down the main line of the old Northern New York Railway, now the Rutland, at Ogdensburg, New York. The freight car pushed against the car on the train ahead. A switchman dropped the pin in the coupling. Smoke poured from the engine's bulbous stack and the train chugged off for Boston, Massachusetts, 2 days away.

There was only one thing out of the ordinary in this incident of 102 years ago: The wooden boxcar coupled on the train was insulated with sawdust, stocked with ice and, loaded with 8 tons of rich New York State butter. This shipment of cold butter marked the earliest-known use of refrigeration by the railways of the United States.

J. Wilder, a conductor on the old Northern, is given credit for "fixing up" the car in the railways shops at Ogdensburg. So successful was the run that he converted a few more cars -- enough to make a run to Boston every Monday. The cars reached Boston every Wednesday. All along the Northern New York Railway to Rouse's Point, New York, on the shore of Lake Champlain, Monday was butter day. And it is reported in old records of the time that within 2 years after the crude refrigerator cars began their run the land value of the dairy farms along the way doubled in price.

This was the beginning of the era of refrigerated transportation in which we live today, an era that provoked a scholar to write, "the people of the United States are as dependent upon refrigerator cars for their food supply as are the people of England upon her ships."

Today ordinary ice is still the standard refrigerant in the Nation's freight and express refrigerator cars, the railways using between 15 and 20 million tons of ice or nearly one-third the total ice production of the country. Not only have vast improvements been made in refrigerated railway cars since the first one rattled across New York State, but dramatic and permanent advances have resulted in our diets and the very basis of our Nation's agricultural development through this service.

Urban dwellers were released from their dependence upon the immediate farming areas surrounding the city for their perishable foods. To smaller towns and farms, it was possible to bring foods that could not, because of local climate or soil conditions be produced in their once self-contained areas. Local seasons no longer dictated that fresh vegetables for the winter dinner table must be selected from potatoes, cabbage, beets, carrots and other such hardy products that could be put down and kept in cellars



or outdoor pits. Fresh products from north, south, east and west were made available to every region of the country.

Whole new and prosperous farming communities were born. Areas with peculiar natural advantages of soil and climate to grow particular food products developed into rich farming areas, though many hundreds of miles distant from their primary market. Land that was once range brush and dust was irrigated and the same hot sun that made it a desert turned it into a rich food-producing region far from the millions of consumers in cooler climes who would use the produce. Packing and shipping enterprises and contributory industries grew up to complete the economic life of hundreds of newly developed or stimulated older farming areas.

The birthday of refrigerated transportation of meat by rail is pegged 6 years after the cold butter was hauled to Boston. In 1857, W.W. Chandler of the Pennsylvania railway insulated some boxcars with sawdust and placed iceboxes in the doorways for the shipment of meat. A strawberry grower named Parker Earle of Illinois figured out a way to get his product to market fresh and flavorful. He utilized small express boxes containing 200 quarts of berries and 100 pounds of ice.

These early tries at refrigeration precede by 10 years or more the first patenting of the refrigerator car. This patent, issued to J. B. Sutherland in 1867, was on a car equipped with ice boxes and meat rails. Just one year later - 1868 - the first refrigerator brine tank car, utilizing ice and salt which could be refilled from the roof was patented by William Davis of Detroit, Michigan. And once more Boston was the destination for a refrigerator car that made history. A car made under the Davis patent was loaded with dressed meat, shipped from Chicago to Boston in 1869, and credited with successfully establishing the long-distance shipping of dressed beef. No longer was it necessary to ship live animals to population centers, risking loss of weight and injury or death.

From these early beginnings grew the transportation of foodstuffs in refrigerated cars. And because of the advent of this service, stockyards like Chicago and Kansas City and Omaha, located in the livestock-producing areas, can slaughter and dress meat for shipment to the four corners of the earth. And because farmers are able to ship perishables for long distances we have agricultural sections such as Salinas, California which ships more than 20,000 carloads of lettuce a year; the winter vegetable area of southern Florida; the orange groves of California, Texas and Florida; the apple orchards of Washington and Virginia; the truck farms of the Delaware-Maryland-Virginia peninsula; and scores of other regions from coast to coast.

Major developments in the refrigerator car came at spasmodic intervals through the years. Railways, shippers, and the Department of Agriculture have cooperated in bringing many of these improvements into existence and putting them into practice. This cooperation is today proceeding at an accelerated pace. PMA, in cooperation with shippers and producers and carriers, reports progress in scores of studies made in an effort to lower shipping costs and advance handling of farm produce.

No major changes were made in the refrigerator car from the latter

part of the 19th century until 1919 when the U. S. Department of Agriculture, working with the U. S. Railway Administration boosted the standards. At that time more than one-half the refrigerator cars in use had less than 1 inch insulation, only 9 percent had permanent floor racks. Basket bunkers were used in only 15 percent of the cars.

New regulations were set up calling for standards considered extremely advanced and daring at the time. They required insulation of  $2\frac{1}{2}$  inches, basket bunkers, insulated bulkheads, floor racks at least  $3\frac{3}{4}$  inches high, and a 5-ton ice capacity.

About 20 years later new standards were proposed. Their adoption was halted by World War II. But these standards were revised again and set up since 1945. The Refrigerator Car Committee of the United Fruit and Vegetable Association in cooperation with the U. S. Department of Agriculture and the American Association of Railroads were influential in establishing them. These latest standards up the old insulation requirements to 4 to  $4\frac{1}{2}$  inches. They call for side wall flues, air circulatory fans, easier-riding car trucks, and end bunkers for use of water ice. The installation of the fan which gives uniform temperature throughout the car is regarded by refrigeration engineers as one major development of the past 95 years in rail refrigeration.

Great as past advances have been, new developments in refrigerated transportation must always be forthcoming. Revolutionary changes in food preservation, marketing of food in new form, and the everlasting problems of damage and spoilage in transit, daily challenge the resources of Government and industrial engineers and scientists.

When the frozen food process burst upon the scene, railroad refrigeration transportation had to adapt to handle the new traffic. The Production and Marketing Administration, in cooperation with the Agricultural Research Administration joined with railways, shippers, and producers in working out improved methods of refrigeration that will be advantageous to all concerned.

PMA, for example, helped to conduct an experiment with dry ice, to determine its ability to protect frozen foods in a transcontinental shipment during warm weather. After a system using dry ice had been installed in a refrigerator car, the car was dry iced, loaded with 5,200 cases of frozen peas, and placed in a test laboratory for 10 days. Temperatures were taken at 4-hour intervals. The temperature of the laboratory -- the air outside the car, that is -- was kept at  $85^{\circ}$  F.

At the end of the test, average top and bottom positions still registered below zero, average  $-2.6^{\circ}$  and  $-3.8^{\circ}$  F. The rate of consumption of dry ice during the 10-day period the car was in the test house averaged 50.7 pounds per hour. Results of the test indicate that this system had ample capacity to refrigerate frozen foods. Its practicability in general service, however, will depend on the cost and availability of dry ice.

Still another experiment was successfully conducted in a laboratory car to determine the ability of iceless refrigerator cars to transport



frozen foods at low temperatures required for a trans-continental run made under summer conditions. Temperatures low enough to give adequate protection were maintained in the refrigerator car for a 10-day test period. The system employed a new application of an old principle. The car was equipped with a split-absorption system. Liquid anhydrous ammonia, the refrigerant used, was delivered to a receiver tank. The flow of ammonia to the expansion (cooling) coils, located in the ceiling of the car was regulated by a thermostatically controlled valve which governed the movement of the refrigerant through the coils and back through the absorption tank.

The results showed that the average top commodity temperature ranged from about minus 4° F. to nearly plus 1° F. The bottom commodity temperature ranged from about -3° F. to 3° F. The tangerine segments, used in this test, were frozen when they were put in the car and were still frozen when they were unloaded.

The past several years witnessed the development of the mechanical refrigerator car. It opened a new chapter in the story of the "reefer." Today 200 of these cars are in daily use and railway-owned refrigerator car lines have ordered 250 more.

This new model is a roving counterpart of its kitchen-bound brother -- the household refrigerator. Although there are several types of mechanical units, some using gasoline and some Diesel motors, the principle of the home refrigerator holds out in all of the new cars.

The mechanical units, consisting of motor, compressor, evaporator coils, and blower, are housed in one end of the car. Provisions is made for the free flow of air from the blower fans, over, around and under the load, through sidewall flues and plenty of space beneath the floor rack through which the air is returned to the compressor. The temperature is thermostatically controlled. The Department, through PMA, did work testing the operations of various types of mechanical refrigerator cars and found them one of the major milestones in reefer development.

The latest advance in mechanical refrigerator cars is the "all purpose" car. This new achievement will give the shipper any temperature his product requires -- warmth in the winter, cold in the summer. It is designed so that fruits and vegetables may be held at the cool temperatures needed and zero temperatures can be maintained for frozen foods in midsummer. A feature of this car is a new system of air circulation intended to reduce loss of moisture of fresh fruits and vegetables while in transit. The same car also provides warm temperatures for the shipment of canned goods, beverages and other products when the winter winds are freezing.

The reefer has rolled a long way since the first car was "fixed up" a century ago in upstate New York. And today the search goes on for better and more economical temperature protection for the products of our farms on the way to market. Department agencies, PMA and the Agricultural Research Administration, in cooperation with railways, shippers, equipment manufacturers, private car lines and others, are all working together to make the refrigerator car keep pace with the future's demands upon it.

# Flaxseed Oil Content Short Cut

By W. Haward Hunt, M. H. Neustadt, Joe R. Hart and Lawrence Zeleny

Grain technologists of the U. S. Department of Agriculture, who last year developed a quick electronic method for determining oil content of soybeans, now have adapted the process for use on flaxseed. With the new method oil content of flaxseed can be determined in 20 minutes or less as contrasted with the several hours required by the extraction methods now in use.

In addition, oil content determinations can be made for flaxseed in quantity by two analysts at the rate of from 20 to 25 per hour with the new equipment. It costs about one-half the estimated cost of extraction equipment presently in use which will test about 36 samples daily. The new method is simple enough that operators without technical training can, with brief instructions, perform the analyses with speed and accuracy.

The rapid dielectric method for determining the oil content of soybeans was described in the July 1952 issue of *MARKETING ACTIVITIES*. In brief, it involves the use of a high-frequency oscillator for measuring the quantity of oil in a solvent-oil mixture. The samples are ground in a special high-speed grinder-extractor in the presence of an oil solvent. The solvent-oil mixture is separated from the ground material by filtration and is then placed in the cell of the electronic oscillator to measure its dielectric properties. The reading is converted to oil content by means of a conversion table.

## Collaborative Study of Method

Since its introduction, the dielectric method has been subjected to interlaboratory study among three laboratories of the Grain Branch, Production and Marketing Administration, USDA. In essence, this was a field test of the applicability of the method by other laboratories, since it involved different operators, batches of solvent, and sets of equipment. The average oil content results obtained by the dielectric method at each of these laboratories was within 0.2 percent of the values obtained by using the official American Oil Chemists' Society method on 10 soybean check samples.

## Trouble in Adapting to Flaxseed

The major difficulty faced in adapting the dielectric method to flaxseed was in the filtering. The flaxseed-orthodichlorobenzene mixture, the end product after simultaneously grinding and extracting in the mill, was gelatinous and required from 30 minutes to several hours to filter. However, it was found that heating the sample for 4 minutes in an infra-



red drying cabinet, which was described in the previous article as a means of removing excess moisture from wet soybeans, would prevent the formation of the gelatinous mixture and reduce the filtering time to 8 minutes or less.

### Deviations Well Within Error Limit

In order to establish the relationship between the dielectric readings of the solvent-oil mixture and the oil content of the flaxseed, 74 samples of flaxseed ranging in oil content from 37.04 to 44.14 percent (moisture-free basis) were analyzed by the regular extraction procedure and by the dielectric method. From 2 to 6 tests were made on each sample, and the meter readings were graphically plotted against the oil content as determined by the regular extraction procedure. The standard error of estimate in determining oil content by the dielectric method was found to be 0.346 in terms of percentage of oil. The coefficient of correlation was found to be + 0.97.

### New Method Much Faster

The new method is rapid enough for use in the inspection of individual lots of soybeans and flaxseed as they are brought to the processing plant. Results on a single sample can be obtained in about 15 to 20 minutes. If a series of samples is analyzed concurrently, the time per sample is greatly reduced. It is estimated that two analysts working with two grinder-extractors and one electronic tester could analyze 20 to 25 samples per hour. An elapsed time of approximately 6 to 8 hours per sample is required by the present standard methods of analysis, and the number of samples that may be run concurrently is limited by the number of extraction units available and the number of samples which can be ground.

### AMA Project

This new, rapid method for determining the oil content of flaxseed and soybeans was developed by the Production and Marketing Administration, USDA, in cooperation with a manufacturer of electronic equipment. It resulted from research at the Beltsville laboratories of the Grain Branch under authority of the Agricultural Marketing Act of 1946. Estimated cost of the special grinder-extractor is \$395 and the cost of the high-frequency oscillator is \$495. The total equipment cost is approximately one-half the estimated cost of the equipment required by the present extraction method for testing 36 samples per day, and many more samples can be analyzed per day with the dielectric method.

Considerable credit for the success in developing this new method is due to the efforts of the Fred Stein Laboratories, Atchison, Kansas, which worked closely with PMA's Grain Branch in designing, redesigning, and building the equipment.

The forced-draft, infrared, drying unit was designed by the Beltsville laboratory and was built by the mechanical shops of the Agricultural Research Center.

# NAMO Conference

This is the second and concluding part of the report on the annual meeting of the Atlantic States Division of the National Association of Marketing Officials held at USDA in Washington during April.

In a discussion of Federal-State cooperative grading projects and minimum requirements for small plants to qualify for official poultry grading, quite a bit of time was devoted to the question of the use of "bonded" graders - plant employees who are licensed and placed under surety bond to grade eggs and poultry.

In his opening remarks, Mr. Lennartson requested the conference to give careful consideration to whether this program should be continued. He explained that various groups, including the Bureau of the Budget and Public Health officials have questioned the use of bonded graders on the ground that "it just doesn't ring right for plant employees to extend your service and ours by grading a commodity in which their employer is financially interested." He said that the poultry industry has resisted the elimination of bonded graders on the ground that it would be impractical and too costly. At present, he added, the Department is waiting for the industry to send in a plan which would be acceptable to its members and give the Department and responsible State agencies adequate protection with respect to supervision.

Henry G. F. Hamman, Chief, Inspection and Grading Division, Poultry Branch, PMA, who spoke on this and other subjects, asked for comments on the matter, explaining that he questioned the desirability of bonded graders, but there still was the problem for small operators of paying a full-time Federal or State grading inspector.

Mr. Chick said that there was a difference of opinion among the State marketing men on this question, but he personally did not think much of the use of bonded graders where a processing plant of sufficient size would be able to carry a full time Federal or State grader. He emphasized the necessity of keeping down the cost of the joint Federal-State grading service for poultry products and added that the major problem in Maine has been the too frequent change in Federal regulations. He felt the time had come for Federal and State men to agree on regulations which would be continued in effect without change at least for a year.

Mr. Lyon explained while the marketing officials of New Hampshire would prefer Federal or State grading, if the size of a plant's operations warranted it, "because the grader would then be independent," it also was felt that some consideration should be given to small operators who cannot afford full time grading. He insisted, however, that the decision in this matter should be left to the State agencies.

Mr. Hamman stated that he knew there were "bonded" graders who would

"stack up" against State or Federal graders for honesty, integrity and ability, but that the question did present problems. For example, he pointed out that the Army will accept USDA poultry inspection for wholesomeness, but will not accept "bonded" grading, whereas a number of poultry plants want graders to be able to qualify for sales to the Army. He added that it presents a problem that must be faced if anything is to be accomplished.

At the conclusion of the discussion, Dewey Termohlen, Director, Poultry Branch, PMA, proposed a meeting with some of the NAMO officials to establish a technical advisory group - which later would be broadened to include industry representatives - to go into the problem raised at the session. He felt that such a group, representing the Department, State officials, and industry, would accomplish some good.

Cecil Rogers, of the Virginia Division of Markets, called attention to the Northeastern Poultry Producers' Council egg quality and grading school which is to be held at William and Mary College, Williamsburg, Va., June 9-12 and invited those present to attend.

#### Possibilities of Cooperative Meat Grading

Harry E. Reed, Director, PMA's Livestock Branch, discussing whether cooperative Federal-State meat grading is possible, explained that one such cooperative agreement is in existence and others would be possible "if they are that kind." "But," he added, "if it is a question of joint application and responsibility in the grading of meat, I'd say that it would not be possible."

The Livestock Branch director pointed out that the Federal grading service is available to all plants if the meat they process is eligible - that is if it is inspected by a city or State and meets requirements of Federal regulations. He emphasized that meat grading is in its present favorable position of trade and consumer acceptance because of strict adherence to Federal standards. He described the Federal grading setup with its plant, local, and area graders and 6 national supervisors and said that this system has brought about much more uniform application of Federal standards than ever before possible, since, "the meat, once it is graded, is checked and re-checked until it enters the retail trade."

Mr. Meek took the position that a cooperative effort on anything is possible if the folks involved will work on a give-and-take basis. He could see no reason why State employees, under close supervision, could not grade meat, particularly if a Federal supervisor hires and qualifies the State grading personnel.

"There is no reason why we can't have a Federal-State meat grading service patterned after other Federal-State inspection and grading services," Mr. Meek insisted; "and, it can be done much cheaper."

Mr. Oley, speaking "not as a livestock producer, but for the consuming public of New Jersey," said that he could see no reason for changing the present Federal grading setup. New Jersey, he stated, is not inter-



ested in a State taking over any part of a Federal program that is working as well as the meat grading program is today in New Jersey.

Spencer G. Duncan, Assistant Director, New York Bureau of Markets, said that his State also is interested in meat grading. He said that on the basis of such work in other fields a Federal-State meat grading service should work, under close Federal supervision. Predicting that compulsory meat inspection is coming in New York within a few years, Mr. Duncan felt that it would be accompanied with a demand for grading, since it is needed as much for meat as for any other food.

Fred J. Beard, Chief, Standardization and Grading Division, Livestock Branch, traced the history of the Federal grading service and the increased demand for federally graded meats brought about by consumer acceptance. He said, however, that consumers are apt to confuse inspection with grading and because of that Federal grading has been restricted to those plants under adequate inspection. He added that Federal grading is an acceptable, uniform system that is dependable.

Mr. Winfield called attention to the tremendous increase in livestock production that has taken place in the Southeast. He said that his State of North Carolina is playing its part in this expansion and does not want to feed its livestock and have to move them to Baltimore and bring back the meat. He felt that any slaughterer in North Carolina with a State inspection grade of "A", and with slaughter and post-mortem inspection should be able to grade meat using the same as Federal standards.

"I feel that we ought to be able to work out some sort of cooperative program on meat grading," he declared. "Some system that would cut down on expenses. You can't expect a plant slaughtering only a few hundred head of livestock to pay \$7,000 a year for a Federal inspector. I feel that the Meat Grading Service is taking a different attitude from other agencies operating Federal-State grading programs."

### Return-Trip Leasing

Considerable interest was evidenced by the conference in a discussion of the proposed and pending Interstate Commerce Commission regulation which would limit return-trip leasing of motor carriers, including those hauling farm commodities. James L. Pease, Transportation and Warehousing Branch, PMA, traced the background of motor truck legislation and regulation to where ICC has proposed that "trip leasing" of motor carriers be prohibited except on a 30-day or longer basis. He explained that this would make it practically impossible for agricultural carriers to get return trip loads which contribute to the economy of their operations.

Regulatory authority of the ICC in this matter has been upheld by the Supreme Court in a case in which the Secretary of Agriculture joined other appellants in seeking to have it set aside. Two bills now are pending in Congress, H.R. 3203 and S.925, which would, if enacted, remove trip-leasing from regulation by ICC. The U. S. Department of Agriculture is supporting this legislation.



Describing the heavy annual volume of agricultural commodities moving by truck and the "annually recurring shortages of boxcars and refrigerator cars," Mr. Pease said that if the trip-leasing rule stands, many exempt haulers (including those hauling farm products) will have to either raise their charges to compensate for empty return trips or go into some other business. In the latter case, he explained, the railroads could not possibly take care of the increased traffic and "losses to producers will occur in the fields."

"In either event," Mr. Pease concluded, "the flexible and efficient distribution system for agricultural products which has been developed since World War I will be seriously disrupted. We see no reason to burn down the barn to get rid of the rats."

A number of speakers condemned the proposed ICC regulation and a motion to adopt a resolution opposing it and supporting the pending legislation was dropped when it was pointed out that the group was not authorized to pass resolutions.

Mr. Youngblood contended that one of the main issues involved is the attempted encroachment upon the agricultural trucking industry," and said that there "is no doubt in my mind that agriculture today is based upon the trucking industry and anything that brings about an improvement in trucking operations will bring about an improvement in agriculture."

Mr. Cathey said that Georgia has recognized this threat to its fruit and vegetable movements and predicted that the regulation would put a lot of producers and dealers out of business there.

Mr. Oley explained that about 99 percent of the New Jersey crops are moved by "exempt" agricultural trucks and held that the order was "uneconomical all the way through."

Mr. Storrs said that while the order would injure Connecticut potato growers who have been shipping South on backhaul loads, there had been complaints from produce truckers who wanted exempt truck carrier rates regulated.

### Prepackaging Problems

A discussion panel on problems encountered in the production and prepacking of vegetables was opened by Dr. Paul E. Nystrom, head of the Maryland Division of Markets, who discussed three of the broad problems in this field - those at the producer end, supply and quality; those in connection with packaging, treatment of product and size and type of package; and at the consumer end, convenience and quality. As examples, he cited the decision packers must make whether to purchase or grow themselves; where the prepacking should be done - by the farmer, the handler, at terminal markets by wholesalers, or by retailers; and what should be done to maintain quality in pre-packed products.

Mr. Carey said that in California one of the main problems had been use of tomato packages for deception, but also pointed out that sales of

prepacked celery and garlic in chain stores sometimes double or treble bulk sales.

Roy Magruder, Agricultural Research Administration discussed research, particularly that done by the Bureau of Plant Industry, Soils and Agricultural Engineering, on disinfectants and types of film suitable for use in prepacking.

Donald R. Stokes of PMA's Fruit and Vegetable Branch covered some results of studies in prepacking carried out by that agency and stated that one of the main problems facing produce prepackers is the uncertain demand for prepacked fresh fruits and vegetables particularly during periods of low prices and large marketable supplies. He recommended that grower and shipper prepackagers should maintain facilities for marketing some products in consumer packages and in conventional shipping containers until there is general public acceptance of such products in prepackaged form.

### U. S. Standards

Raymond L. Spangler, Chief, Standardization Section, Fruit and Vegetable Branch, outlined work done during the past year on new and revised U. S. grade standards for fruits and vegetables. There are 140 of these standards in effect, including 9 consumer standards. Mr. Spangler commented on the developing trend toward use of consumer standards for prepacked carrots, and felt that an operation such as this would make consumers grade conscious.

He said that consumer standards have not become popular because of the lack of an adequate supply of good quality products at all times and the cost of continuous inspection. He felt, however, that they still were best for prepackaged products because wholesale grades have "too much tolerance for produce that is supposed to be ready for the pot."

Commenting on humorous newspaper stories that greeted a proposal of the Department to establish grades for cut daffodils as requested by Virginia growers, Mr. Spangler pointed out that the cut flower industry as a whole is quite a large industry and "people who grow flowers have a right to USDA services as well as other producers." The USDA proposed daffodil standards, dropped pending action by the florist industry on the entire question of standards, were adopted by the State of Virginia and flowers from there were marketed under them this spring.

### Market News For Flowers

A panel on the question of market news service for cut flowers was opened by C. D. Schoolcraft, Chief, Market News Service, PMA, who explained that so far there has been no great interest in this matter on the part of the industry, but that some State marketing agencies have displayed interest in such a service. He said that the flower industry, however, might find, like the fruit and vegetable industries already have found, that the benefits of market news far outweigh its disadvantages.

Mr. Schoolcraft suggested that a market news service for flowers probably would have to be a Federal-State cooperative project, limited to a few large metropolitan markets. He thought that there would be justification for such an AMA project for a short period to study the need for and operating problems involved in a floricultural news service.

A revealing and interesting history of the development and economy of the floricultural industry in the United States was presented by Truman M. Fossum, Bureau of Agricultural Economics. He said that the "key items" in the industry are roses - both for the cut flower trade and the nursery growers - and a market news service based on just these two items, cut roses and rose bushes, would give the trend in the entire industry.

Julius Kremberg, Department of Agriculture and Markets, New York, gave the history of the State operated market news service for flowers on the New York City market and explained that similar information from other markets would be extremely helpful in preventing market gluts there. He added that New York wholesalers consider gladioli their "key item" since when they drop the rest of the market drops, which is not always true with roses.

In further discussion of the question, Mr. Risher recommended that cut flowers be placed under the Perishable Agricultural Commodities Act, while Mr. Meek felt that public agencies should lead the way in flower market service work and not wait until they are "pushed" into it.

In an executive session following the conference, those present elected Mr. Risher president of the group for the coming year and Mr. Webster of Massachusetts, secretary.

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## SERIOUS SITUATION IN GRAIN STORAGE LOOMING

With what may be record supplies of corn and wheat indicated for the 1953-54 marketing year, USDA already has taken steps to meet the threat of a possibly serious situation in grain storage after harvest this year.

Secretary Benson, in a public statement has called upon farmers and others to anticipate wheat storage needs and take action to see that adequate facilities will be available. While main responsibility for storage will rest on commercial warehousemen, the Secretary urged farmers to consider further expansion of on-farm facilities.

A "re-seal" program has been announced for several States for 1952-crop wheat under loan or purchase agreement with CCC. (Such programs already exist for 1952-crop corn and oats.) The CCC farm storage facility loan program has been extended. A conference on farm storage facilities for corn was called at Des Moines, Ia., for June 3. Arrangements have been made for use of 125 Maritime Commission ships for storage of CCC wheat stocks. The ships, 50 near Norfolk, Va., and the rest near New York City, are being fitted up to handle about 225,000 bushels of wheat each.



# Marketing Briefs

(The program announcements summarized below are more completely covered in press releases which may be obtained on request from the Office of Information, U. S. Department of Agriculture, Washington 25, D. C. by citing the code number given at the end of each item.)

Cotton.--Details of loan program for 1953-crop upland and extra long staple cotton have been announced. (USDA 1229-53)... The 10th Universal Cotton Standards Conference, held here in mid-May, approved boxes of universal cotton standards which will be the basis for international trade in American upland cotton for the next 3 years. (USDA 1191-53)... The discount of \$2 per ton on cottonseed slab cake delivered to CCC under the 1953 cottonseed products purchase program has been ended. (USDA 1109-53). Agricultural Research Administration reports that spray combinations of DDT with other chemicals promise better cotton pest control. (USDA 1248-53)... Several sales of kenaf fiber, a jute substitute produced under CCC contracts, have been announced. (USDA 1054-53, 1131-53 and 1236-53).

Dairy.--Return to the flexible price support provisions of the Agricultural Act of 1949 has been recommended by a special dairy producer-industry task group as part of a broad program for attacking problems of that industry. (USDA 1143-53)... Distribution of up to 35 million pounds of Cheddar CHEESE under a Section 32 program has been announced. First of the cheese, which was acquired under the dairy price support program, went for flood relief in the Lake Charles, La., area. (USDA 1278-53)... In addition, USDA is making 100 million pounds of nonfat DRY MILK solids available to school lunch programs, welfare groups and other eligible outlets. (USDA 1043-53)... Announcement has been made that up to 10 million pounds of nonfat dry milk solids purchased under the dairy price support program will be bought packed in multiwall paper bags at prices slightly less than for the same product in fiber drums. (USDA 1057-53)... U. S. Standards for roller process nonfat dry milk have been amended to permit an increased amount of scorched particles, effective May 8, 1953. (USDA 1053-53)... Through May 20, USDA had purchased 125,000 cases of EVAPORATED MILK for Greece under a Mutual Security Administration requisition. (USDA 1196-53)

A recently named 14-man dairy technical committee is to meet at USDA on June 10 to study and review Federal milk marketing order programs "to the end that they are in the public interest." (USDA 1257-53)... Action was taken during the past month on the following milk market orders: MILWAUKEE, (USDA 1177-53 and 1252-53). SPRINGFIELD, Mo., (USDA 1104-53, 1198-53 and 1226-53). ST. LOUIS, (USDA 1029-53 and 1194-53). NORTH TEXAS (USDA 1027-53). SAN ANTONIO, (USDA 1027-53). DAYTON-SPRINGFIELD, Ohio, (USDA 1274-53). DETROIT, (USDA 1269-53). QUAD CITIES, (USDA 1132-53). MUSKEGON, Mich., (USDA 1098-53). CENTRAL WEST TEXAS, (USDA 1080-53). CINCINNATI, (USDA 1066-53), and MINNEAPOLIS-ST. PAUL, (USDA 1028-53)

Fats and Oils.--USDA, for the first time, has reported on a comparative basis the quantity of SOYBEANS, COTTONSEED, and FLAXSEED processed and the crude oil produced by the various extraction methods for the



1951-52 season. (USDA 1038-53)... The price support program for 1952-crop OLIVE OIL has been extended through May 1953. (USDA 1178-53)

Fruits and Vegetables.--Action was taken during the past month on the following marketing agreements and orders: DRIED PRUNES, (USDA 1142-53), Colorado PEA and CAULIFLOWER, (USDA 1144-53), and Georgia PEACHES, (USDA 1203-53)... Members were named to the following marketing agreement and control committees: California DECIDUOUS FRUIT, (USDA 1176-53), Oregon-California POTATO, (USDA 1163-53), Idaho-Malheur County POTATO, (USDA 1163-53), RAISIN Advisory Board, (USDA 1246-53), WALNUT Control Board, (USDA 1237-53), and FILBERT Control Board, (USDA 1237-53). Actions have been taken on U. S. grade standards as follows: Revision proposed for CHILI SAUCE, (USDA 1065-53), Revision for FRESH SHELLED LIMA BEANS for processing, (USDA 1042-53), Revision for CANNED FRUIT COCKTAIL, (USDA 1042-53), NO revisions are to be made in standards for CANNED WHOLE KERNEL CORN, (USDA 1153-53) or FROZEN ASPARAGUS, (USDA 1112-53). Standards have been proposed for FROZEN COOKED SQUASH, (USDA 1117-53)

Grain, Hay and Seeds.--Joint announcement has been made by USDA and the Department of Health, Education and Welfare that a plan to promote improvement in harvesting, storage, transportation and processing of grain is being developed with grain growers, handlers and processors. (USDA 1036-53). Revision of the quarantine against WHEAT imports to prevent flag smut disease has added 25 countries to prohibited list. (USDA 1119-53). Use of high-protein SOY FLOUR to produce bread of satisfactory physical properties is now possible. (USDA 1235-53). CCC has sold 80,000 tons of AUSTRIAN WINTER PEAS for feed use. (USDA 1034-53)

Livestock.--Through May 27, USDA had purchased 3,576,000 pounds of BEEF for Greece under an MSA requisition. (USDA 1256-53). Secretary of Agriculture Ezra Taft Benson has congratulated the food industry on its efforts to increase beef sales. (USDA 1133-53)

Poultry.--A permanent TURKEY industry advisory committee has been named by Secretary Benson. (USDA 1188-53)

Sugar.--Fair and reasonable prices for 1953 crop sugar beets which processor-producers must pay to be eligible for Sugar Act payments have been announced. (USDA 1255-53). Changes in rules under which sugar may be handled without charges against quotas have been proposed by USDA. (USDA 1231-53). Announcement has been made that restrictions on the marketing of sugarcane in Puerto Rico will be continued for the 1953-54 crop since potential supply there is in excess of quota and carry-over requirements. (USDA 1202-53). USDA has purchased 13,000 tons of over-quota Puerto Rican refined sugar for Greece. (USDA 1113-53)

Wool.--Under a change in the loan provisions of the 1953 shorn wool price support program, wool may be eligible for loan even though title has passed from grower to a grower-owned marketing association, provided all beneficial interest in proceeds from the wool is vested in the grower and not the association. (USDA 1110-53). USDA has named a 12-man committee to advise in operation of the wool price support program with emphasis on sound merchandising of government-owned wool. (USDA 1086-53)

## ABOUT MARKETING

The following addresses and publications, issued recently, may be obtained upon request. To order, check on this page the publications desired, detach and mail to the Production and Marketing Administration, U. S. Department of Agriculture, Washington 25, D. C.

### Publications:

- United States Standards for Grades of Nonfat Dry Milk Solids, June 1951 (Amended May 1953). 2 pp. (PMA) (Processed)

U. S. Standards for Fresh Shelled Lima Beans for Processing (Effective June 6, 1953) May 21, 1953. 3 pp. (PMA) (Processed)

Notices of Judgment Under the Federal Insecticide, Fungicide, and Rodenticide Act, 134-169. April 1953. 108 pp. (PMA) (Printed)

Naval Stores Inspection and Grading Service. March 1953. 7 pp. (PMA) (Processed)

Carlot Shipments of Fresh Fruits and Vegetables by Commodities, States, Counties and Stations Including Boat Shipments Converted to Carlot Equivalents, Calendar Year 1952. May 1953. 51 pp. (PMA) (Processed)

Consumer Purchases of Fruits and Juices in April 1953. May 1953. 16 pp. (PMA) (Processed)

Fruits and Juices Availability in Retail Food Stores, February 1953. April 1953. 25 pp. (PMA) (Processed)

Merchandising Peas and Split Peas Packaged in Transparent Films. May 1953. 21 pp. (PMA) (Processed)

The Pesticide Situation for 1952-53. March 1953. 36 pp. (PMA) (Processed)

The Wholesale Produce Market at Bridgeport, Conn. April 1953. 56 pp. (PMA in cooperation with Conn. Dept. of Farms and Markets) (Processed)

Some Refrigeration Tests of a Motor Truck-Trailer Equipped With One Type of Dry Ice System of Refrigeration (An Interim Report) April 1953 27 pp. (Processed)

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